

liquid dishwashing detergent to the spray mix. It may also be helpful to add a commercial agricultural dye to the mix to mark plants that have been recently sprayed.

### **Top Removal Method**

Nonsprouting seedling juniper species may be killed by removing the plant top at or near the ground line with a chain saw, pruner, ax, or other means. Juniper species that resprout may be controlled if they are grubbed below the basal knob located at or slightly beneath the soil surface.

### **CONCLUSIONS**

The cost of controlling juniper by individual plant treatments will vary according to the size and density of the infestation. It is best to treat young junipers that are less than 6 feet tall because they are easiest to control. Areas previously cabled, chained, or bull dozed, or areas where juniper is invading are good prospects for treatment.

Individual plant treatments can be used to control undesirable trees while selectively leaving desirable plants. Periodic follow-up treatments will be necessary to maintain low juniper populations.

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Authors: Keith Duncan and Kirk McDaniel, Extension Brush and Weed Control Specialists

For more information about controlling juniper and other brush and weed species, contact your county Extension agent.

To find more resources for your home, family, or business, visit the College of Agriculture and Home Economics on-line at [www.cahe.nmsu.edu](http://www.cahe.nmsu.edu).

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# Juniper Control: Individual Plant Treatments



College of Agriculture and Home Economics  
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Juniper (cedar) occurs throughout New Mexico, occupying 23 million acres. Five species are common: one-seed juniper (*Juniperus monosperma*), Utah juniper (*J. osteosperma*), Rocky Mountain juniper (*J. scopulorum*), alligator juniper (*J. deppeana*), and redberry juniper (*J. pinchoti*).

Juniper grows in association with pinyon pine (*Pinus edulis*, *P. monophylla*, and *P. cembroides*), but also grows in pure stands. Juniper is dominant at lower elevations before grading up into mixed stands with pinyon. Many wildlife species rely heavily on juniper berries.

Juniper control efforts will not produce long-lasting results without a commitment to sound grazing management. Juniper control will not compensate for mismanagement. Under improper management, juniper or other undesirable vegetation will return to dominate the site.

When selecting a juniper control method, consider the presence of other undesirable plants. Removal of one species can result in the rapid increase in another. As a result, soil moisture does not become available for desirable species. Follow-up treatments on other undesirable species may be necessary after juniper control.

**INDIVIDUAL PLANT TREATMENTS**  
Individual plant treatments usually do not result in significant increases in forage production. Rather, individual plant treatments are used as a follow-up measure after other broad-scale juniper control efforts, or as a preventative treatment. Individual plant treatments are recommended for areas such as fencerows, around watering facilities, or in areas of sparsely distributed plants with fewer than 150 plants per acre.

**Soil-Applied Treatments**  
The soil-applied herbicide hexazinone (Velpar L™) is very effective for controlling juniper at any time of the year. Apply undiluted hexazinone to the soil surface just outside the canopy drip line. Apply at the rate of 3 ml (cc) per 3 feet of canopy height. If the plant is greater than 3 feet tall, thus requiring more than a single 3 ml (cc) dose, space the applications evenly around the plant. On slopes, apply most of the herbicide on the uphill side.

Hexazinone may be applied with water at a ratio of 1:1. Apply sufficient mixture to give a hexazinone rate of 3 ml (cc) per 3 feet of canopy height.

Precipitation is required to move hexazinone into the soil profile for root uptake. Final results may not be realized for 2 to 3 years from application date. Grasses and weeds may be killed where each spot of hexazinone is applied and their recovery may take 2 to 3 years. Do not apply hexazinone to snow-covered or frozen ground.

One-seed and rocky mountain juniper are the most difficult species to kill. Utah juniper is least difficult to control and alligator juniper is intermediate.

**Foliar Sprays**  
Foliar sprays on individual juniper work only on trees less than 3 feet tall. Spray in late spring through summer

while the trees are actively growing. Thoroughly wet the entire plant to the point of runoff.  
A pump-up garden sprayer, backpack sprayer, cattle sprayer, truck-mounted sprayer, or sprayer mounted on a four-wheel all-terrain vehicle (ATV) works well. Garden sprayers are best suited for spraying a few plants, while backpack sprayers are more efficient for larger acreage or higher plant densities. ATV sprayers are most efficient on very large acreages or as the distance between plants increases. It is best to have a sprayer with an adjustable nozzle capable of delivering a coarse spray with large droplets.

**Herbicide Mixtures**  
Seventy-five to 100 percent root kill of small juniper may be achieved by foliar spraying with the herbicide picloram (Tordon 22K™). Prepare the spray as a 1% concentration of picloram in water (table 1).

To ensure thorough coverage of the foliage, add either a commercial surfactant or

**Table 1. Recommended spray mixture for foliar spraying individual juniper plants.**

Ingredient	Concentration in spray solution	Tank size		
		3-gal	14-gal	24-gal
Picloram	1%	4 oz	18 oz	32 oz
Surfactant or dishwashing detergent	1/4%	1 oz	5 oz	8 oz
Dye	According to label			

*Always follow label directions. Do not spray if foliage is wet. Do not spray immediately upwind of desirable trees, shrubs, or crops.*